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The first paradigm is defined by the casebook, or Socratic teaching method created by Harvard Law Dean Christopher Langdell, The second paradigm is defined by the West digest system, created by John D. West in the late nineteenth century, and the third by computer assisted legal research, or CALR, which has supplanted the West Digest system as the main form of legal research in the last twenty years. The paper will further argue that while the West Digest system influenced the development of the American legal system in the twentieth century, so too will CALR influence the development of the law library.

Headings

Legal Research – study and teaching

Libraries – electronic resources

Law librarians and collections

LAW LIBRARIES AND COMPUTER ASSISTED LEGAL RESEARCH: CHANGING
PARADIGMS OF STRUCTURE AND INFORMATION SEEKING

by

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The purposes and functions of law libraries have changed greatly over the course of the last eight hundred years. The first European law libraries served as repositories for the Catholic Church. As the law became institutionalized as a profession and began to be taught in universities, law libraries were established in several places of higher learning, including the University of Bologna in Italy and Oxford University in England. The first American law libraries were established in the offices of private practitioners, and in the first law schools in the United States, at the College of William and Mary and Harvard University. This paper will argue that American legal education and research is defined by three paradigms, using Thomas S. Kuhn's definition of a paradigm as "a set of concepts, patterns, or assumptions to which those in a particular professional community are committed and which forms the basis of further research."¹

The first paradigm is defined by the casebook, or Socratic teaching method created by Harvard Law Dean Christopher Langdell, The second paradigm is defined by the West digest system, created by John D. West in the late nineteenth century, and the third by computer assisted legal research, or CALR, which has supplanted the West Digest system as the main form of legal research in the last twenty years. The paper will further argue that while the West Digest system profoundly influenced the development of the American legal system in the twentieth century, so too will CALR influence the development of the law library.

This paper will be organized into four main parts. First, I will discuss the origins of American legal bibliography in Western Europe and the English common law. After a

short discussion of English legal research, I will briefly examine the organization and contents of the first American law libraries, and then offer a broader analysis of the influence of the Socratic method of legal education (an oppositional form of pedagogy where a professor calls on a student to recite a particular case in class, and defend his positions) on those institutions. Second, I will outline the development of the West Digest system and explain the influence that taxonomy has had on the development of American law. Third, I will explain computer assisted legal research, give an account of its spread and development, and show how it has upended the traditional structure of legal libraries. Finally, I will argue that as the West system provided a structure of understanding the law, the establishment of CALR as a research paradigm will lead to an understanding of the law that is less rooted in legal ideas and principles, and more rooted in fact-specific situations. For instance, we might see an ongoing growth of written code (law written by legislatures) at the expense of the development of the common law (law created by court decisions and followed by precedent), to the extent that fact-specific law becomes more popular.

Part I

The very first western European law libraries usually consisted of small collections (around nine works) consisting of a few core holdings of ecclesiastical and secular law, such as the *Clementines* and the *Justinian Code*.² These works were most often held at cathedrals for the benefit of Catholic bishops and the church courts they administered.³ The law was not considered a formal avocation during the early part of the Middle Ages, and therefore no formal program of legal instruction was developed until professional attorneys became more commonplace during the high Middle Ages and

early Renaissance. The first law libraries began to take form in universities (which were considered quasi-ecclesiastical institutions) at that time, as the church's collections of legal resources began to migrate through gifts and bequests to these institutions of higher learning. The growth of these libraries would often depend on the generosity of a prominent lord or churchman. In England, for example, the law library of All Souls College, Oxford was established in the early 1440s through a gift from Henry Chichele, Archbishop of Canterbury.⁴

As the profession was young and the collections were small, there was no formalized system of legal research in early modern England. The main resources available from around 1292 to 1535 were primitive legal yearbooks (collections of manuscript court decisions).⁵ The first official case reporters (books that contain judicial opinions from a selection of case law decided by courts) were published in the reign of Elizabeth I; the first publication being recorded in 1571.⁶ Subsequent commentaries (analysis of law by prominent scholars and jurists), like those of the Elizabethan and Jacobean jurist Sir Edward Coke, most often relied up the notoriety of their author for their authority, and did not follow a standardized format to facilitate research.⁷

The English legal profession was profoundly affected by the Enlightenment; the law came to be seen less as a journeyman's craft and more as a social science. In this new view, as Robert Berring put it: the law was "a body of knowledge that had its own structure and was reducible to rational propositions."⁸ Scholars during this time furthered the development of legal research by attempting to define the law as a unitary and rational structure that could be explained and organized according to certain overarching concepts.⁹ The greatest of these scholars was Sir William Blackstone, who wrote his

magnum opus *Commentaries on the Laws of England* in the late eighteenth century. The *Commentaries* consisted of an analysis of the development of the English common law from the Middle Ages to the Eighteenth century. As source material, the author used primarily case law. Blackstone, who was influenced by Newton and Locke, posited that the law consisted of universal truth that could be ascertained by rational deduction.¹⁰ Blackstone is important not only because of his role in English legal scholarship, but also because his argument -- that the law was universal and could be conceptualized and understood through the scientific method -- greatly influenced the development of American legal research, and the educational theory of Christopher Columbus Langdell, who first devised the Socratic method of legal education at Harvard in 1880. Langdell applied the notion of the law as a science to pedagogy. He argued, like Blackstone, that the law consisted of universal truths that could be understood through deduction, and that the library was an indispensable repository of truth. However, it took some one hundred years after independence for the American legal system to evolve sufficiently to produce a reformer of Langdell's caliber.

American legal bibliography developed like its English counterpart in that lawyers relied first on individual court reporters and statute books. Most law library collections were quite small, and owned by individual practitioners. Legal education was not widespread; the first American law schools were established at William and Mary and Harvard in 1779 and 1817, respectively. But these places were exceptions to the norm; law schools were not widespread, and a law degree was not required to sit for the bar in most states until the twentieth century. Rather than being theoretically based, legal education was geared around practical skills and a few treatises, like Coke and

Blackstone; the library itself was almost an afterthought. Collections were small, space was limited, and staff members were not professional librarians (or even licensed attorneys), but part-time law students.

The *theoretical* role of the library changed drastically with the rise of Christopher Langdell and the Socratic method.¹¹ Langdell, Dean of Harvard's law school 1870 to 1895, introduced almost all of the institutions one takes for granted in American law schools today, including the law review, moot court, three-year curriculum, and Socratic method. Langdell was a forerunner of the progressive movement, which held that many of the country's social ills could be ameliorated through scientific methods. Langdell argued that the law should be seen as a science to be divined through inductive logic.¹² The goal of the Socratic method as formulated by Langdell, is to induce students to apply inductive logic to specific cases, and thereby learn a broader legal principle, or truth. By learning law through cases, undergraduate style textbooks become unnecessary. The library plays a central role in Langdell's vision, at least in theory. The library is the indispensable repository of knowledge wherein these facts and cases are stored; the student would use the library to ascertain truth. Langdell himself believed the library played a central role; he famously said that "The library is to us, what the laboratory is to the chemist or the physicist and what the museum is to the naturalist."¹³ Langdell again personally affirmed the role of the Harvard law library when he said:

"The most essential feature of the School, . . . that which distinguishes it most widely from all other schools of which I have any knowledge, is the library . . . Everything else will admit of a substitute or may be dispensed with; but without the library the School would lose its most important characteristics, and indeed its identity."¹⁴

Dean Langdell's program for legal education became the de facto standard for American law schools until the early seventies, and even today it is difficult to understate his influence.¹⁵ However, the library did not become the central force that Langdell envisioned, largely due to standardization of legal curricula and the increasing popularity of casebooks (texts on a certain subject -- torts, contracts, and constitutional law, for example -- that contain selected cases concerning those topics).¹⁶ Students prepare for a traditional Socratic class by reading and briefing cases; when Langdell first instituted his policy, the law library did not have enough copies of the assigned cases for all the students.¹⁷ The casebook was agreed to as a solution, but it made the library superfluous by containing all the materials needed to prepare for class.¹⁸ Independent research amongst law students was relatively uncommon until some forty years ago; the library was more of a place for study than anything else.

At the same time, the Socratic method of case study represented a paradigm shift in legal research in that it forced the student to focus on primary documents (cases) in order to fully understand legal theory, rather than simply regurgitate lecture notes or textbook material. Langdell's vision of the library as an integral workspace of the attorney-in-training was a radical shift from the former role of law libraries, when they housed materials used for theoretical research and were primarily of use to faculty, but not students. The theory of case instruction soon ran into the physical inability of libraries to serve the needs of multiple students at once, but perhaps Langdell's original vision could better be realized in this age of CALR, when those physical limitations do not apply. Facts derived from primary sources remain the indispensable element in legal education, and in that respect, the Langdellian vision endures to this day.

Part II

The popularity of the Socratic method revolutionized legal education in the late nineteenth century; students focused on cases, rather than treatises and textbooks, in order to study and prepare for class. Likewise, practicing attorneys relied on cases and statutes in order to ply their trade. There was no one single, authoritative source for all these materials. Students could rely on casebooks to some extent to meet their needs, but professionals relied especially on official court reporters and legislative records in order to retrieve usable information. This system of legal practice and research, which grew organically with the American legal trade, had several inherent limitations. First, there was no overarching system to index multi-jurisdictional cases and statutes by subject matter. While it might have been useful to learn the rationale behind a neighboring jurisdiction's law, the information would be very difficult to access, unless the lawyer also subscribed to that jurisdiction's legal digest.¹⁹ Second, there was no uniform system of citation between states, or even between individual courts. Third, the profusion of reports often forced attorneys to subscribe to multiple digests at great expense.²⁰ Finally, the official sources that the practitioners relied upon often took too long to publish. The lawyer would buy an unofficial source as a temporary fix, but courts would not often accept arguments based on information gleaned from unofficial, and therefore unreliable sources.²¹

The main goal of the West digest system was to consolidate the research process, so that an attorney or student could consult a single, authoritative source for a given case or statute, instead of consulting the perspective official reports of each individual court or legislature. The West publishing company pursued this goal by creating a unified print

reporter system, and by creating an intellectual taxonomy of legal concepts, known as the West key number system, so that students and attorneys could more easily conduct their research by concept and theme, rather than by court and date alone. Both the reporter system and the key number system still exist today, although use of the print reporters has been on the decline for some years now, and the key numbers have been largely subsumed into the West online database.

In 1879 West's company, which was based in St. Paul, Minnesota, published a series of volumes called the North Western Reporter.²² These books combined official court opinions from five surrounding states, divided into six regions, and eventually the West Reporter system grew to cover the entire United States. Selling volumes organized by groups of states, rather than individual states, benefited researchers in a number of ways. First, researchers benefited in having case information from neighboring states became readily available in a consolidated set of books. Second, materials were published quickly. Third, as Allan Hanson said in *From Key Words to Key Numbers*, the included materials were comprehensive; "West solicited opinions from all appellate-level judges and published them all, with ... no evaluation as to their importance or contribution to the law."²³ As the popularity of the reporter system grew, its citation scheme became the de facto standard in the legal profession, thus eliminating the research problem of having to deal with several disparate citation schemes. While the consolidated print reporter system benefited students and professionals, it also benefited West in that combining material from multiple states enabled the company to sell its product to a wider customer base.

Because the West reporter system was a comprehensive collection of nationwide case law, the publisher needed to create a conceptual indexing system of legal principles.

Organizing the materials conceptually made it easier to craft a unified resource that cobbled together the laws of the individual states, as well as the federal government. In doing so, the cases could be more readily categorized by topic (contracts, torts), rather than by date or the deciding court. This is especially necessary in legal research, as the goal of the attorney is often to find a factually similar case that deals with the appropriate topic and doctrine of law. Robert Berring defined the West key number scheme as

“... a classification system that purports to describe every possible legal situation that can exist. The closed-ended universe of classification thus created was built on a structure of topics and key numbers that allows for the detailed sorting of legal issues into neat categories and sub-categories.”²⁴

The key number system (which was not created by John B. West, but by a man named John A. Mallory, who was an employee at West’s firm) was first published in 1879, and grew from Christopher Langdell’s curriculum at Harvard, which in turn was derived from Blackstone’s classifications.^{25 26} The Langdell curriculum divided legal subjects into a few main topics, including Torts, Property, Contracts, Civil Procedure, and Criminal Law. The first West classification system divided the law into seven similar divisions, with numerous secondary and tertiary categories.²⁷ The number of subjects covered in the West taxonomy has sharply increased in the one-hundred years of its existence, to include some 90,429 postable lines, and new digest topics, like “aviation” and “automobile”.^{28 29} While the system is constantly growing, it undergoes periodic revisions as well where obsolete legal concepts have been removed, or the wording of certain concepts has been changed; for example, the old key topic of “Master and Servant” has been subsumed into broader subjects of employee and agency laws.³⁰ Indeed, any system that did not change with the legal world would be of very questionable value, if not downright impossible. John B. West said that a “rigid

permanent classification scheme is as impossible of attainment as the universal code”, and the digests should be based on an “an elastic scheme.”³¹

As stated before, the key number system is an intellectual taxonomy of legal concepts; each individual concept is given a key number, which is then indexed, and inserted into the case head notes. The researcher can thus search for cases related by subject matter, or scan the key number in a case’s head notes without reading the entire decision. According to Fritz Snyder, the digest system also provides “a scope note for each digest topic showing subject inclusions and related topics, a subdivision analysis for each topic by key number, and a descriptive word index.”³²

The creation of this comprehensive print digest, with a well-organized taxonomical structure, proved to be an enormous benefit to law libraries and their patrons by providing a single resource for the user, that was organized in a consistent and clear way. Some time after the creation of the digest and Key system in the late nineteenth century, the West print reporters became essential components of any law library, and the key number system became the lingua franca of legal research. John B. Kaiser’s *Law, Legislative, and Reference Materials* suggests that while popular, the West digests had not yet become indispensable. In this survey on legal and other government related libraries, Kaiser outlined the standard collection development and cataloging procedures for a law library of the time. The former section is most interesting, as the author describes the items that should be part of a core collection.³³ He wrote that while the West digests were important, official court reporters and statute books remained the official standard.³⁴ The status of the Digest appeared elevated by 1953, the publication date of William R. Roalfe’s *The Libraries of the Legal Profession*. Roalfe’s book is a

survey on the state of law libraries in the early and mid-twentieth century. The author offers data and discussion on collection composition, the size of the libraries surveyed, circulation rates, and the quality of librarians and other support personnel. Roalfe affirmed the importance of the digest standard in this book, writing that

“Every library of any consequence contains some or all of the standard approaches to the law which are national in scope, i.e. the legal encyclopedias, the American Digest System, the Annotated Reports, and, in addition ... some and often all of the units of the National Reporter System.”³⁵

So by the fifties, the American Digest System and the National Reporter System, both published by West using the West taxonomy, had become a necessary component to “every library of consequence”. The locus of the legal research world had shifted from the official decision or statute to a national digest.

The West reporters and key number system shifted the paradigm of legal research away from individual court reporters and statute books to a single, unified means of conducting research with a single conceptual taxonomy and a uniform method of citation. The benefits of this new system included a decrease in the time needed to perform research, much more information was made available to users (if one knew how to use the system), it became much easier to research the law in terms of subject matter and concepts, and in turn, it became easier for the researcher to draw relationships between those concepts.

At the same time, a number of criticisms have been made against the West key number system over the years. One of the most common of these is that the key number taxonomy is too rigid; Allan Hanson noted that in his goal of maintaining the integrity of the index, West has been reluctant to add new topics to its classification scheme.³⁶ This

slowness to adapt was exacerbated to some extent by the organizational structure of West. Up until the nineteen-eighties, any addition of key numbers to case head notes had to be approved by four senior editors, which probably created bottlenecks in the system.³⁷ Hanson cited Robert Berring, who stated this would have the practical effect of shoehorning new fields of legal study, like civil rights law and feminist jurisprudence into pre-existing categories.³⁸ While West has made an effort to cross-walk new terms with existing ones, attorneys in new fields have found the system slow to adapt.³⁹ As Hanson further notes (and any first-year law student who has taken beginning legal research knows), the American Digest System can be cumbersome to use, and the information retrieved might not fully satisfy the information need of the user.⁴⁰ When using the West classification system, the researcher is forced to rely upon the judgment and rationale of the West indexer, which might not correspond with the user's own thought processes; the user might then be led to a irrelevant case because their analysis differs from the West indexer. Researchers avoid this problem by consulting a legal encyclopedia first on the basic legal principles involved (as the encyclopedia entries are more clear than the Digest index entries), and then referring to the relevant key numbers listed in the article.⁴¹ Finally, the use of a single key number system for the different legal systems of all fifty states, plus the federal government, can be problematic. For example, the differences in law in Louisiana (which is based on the Napoleonic Code) and North Carolina (which is based on the English common law) are great. Bast correctly noted that "The complexity of the differences among the jurisdictions is masked by a universal key number system."⁴² In relying on a universal indexing system, the researcher might miss subtle distinctions in concepts and terminology between the respective systems.

The proliferation of print digests also gave rise to a problem that is common in all libraries – the lack of space. Before the advent of the West digests, firm libraries focused on collecting official reports from the courts where their attorneys argued the most. Even after Langdell's educational reforms, collection development was given short shrift, and the libraries' holdings most often consisted of materials bequeathed to the institution by private practitioners.⁴³ The publication of the West reporters was in many ways a godsend to both private and academic libraries; they were provided a comprehensive, well-indexed collection of the laws and statutes of each state and the federal government. However, the complete print reporter set takes up a great deal of space. Furthermore, the reporters needed to be continually revised and updated; and the revised volumes were almost always greater in length. External factors contributed to the space issues libraries faced, such as the explosive growth of laws and regulations in the last eighty years of American history, beginning with the New Deal in 1933.

The resulting space issues are best illustrated in David Mao's profile of Elizabeth Finley, who was the head librarian at the Washington D.C. firm of Covington and Burling from 1943 to 1963. The practice of Covington and Burling was mostly centered around government work; before the New Deal, the firm's collections consisted mainly of the Supreme Court reports, the Federal reports, the reports of the Appellate and District courts of D.C.⁴⁴ Before Finley arrived, the firm's library consisted of a single room with a long table and several chairs for attorneys to use.⁴⁵ Under Finley's leadership, the firm began to collect Federal regulations, as well as information on the legislative histories of congressional bills (legislative histories became increasingly important in the post-New Deal era, as courts began to examine the intent of the

legislators in statutory construction); by the nineteen-forties, the library had compiled legislative histories of 107 acts of Congress and indexed 23 volumes of legal memoranda.⁴⁶ By the end of 1958, the circulation count had increased to 46,893, and the staff had compiled 750 legislative histories.⁴⁷ At the close of Finley's tenure, the library's collection included 16,277 volumes, the circulation number increased to 69,747, and the staff had compiled 837 legislative histories.⁴⁸

The growth of the Covington library collection is probably due more to the expansion of federal regulations and the increasing popularity of legislative histories than the growth of the West digests (as Covington and Burling is a premier D.C. law firm, and their practice is centered around the federal government), but the Mao piece is useful in that it illustrates the additional space related pressures to which law libraries were exposed in the latter half of the twentieth century. The West digest represented a paradigm shift in that it simplified and standardized the process of legal research. But this system was not without flaws, many of which are shared by all taxonomies to some extent, such as inflexibility, excessive reliance on the expertise of the indexer, and a difficulty in dealing with the organic growth of the law. This last flaw has become especially problematic in the last half of the twentieth century, with the explosion of laws and regulations at all levels of government, and the advent of new technologies (fifty years ago, there was no such thing as "Internet Law", and materials covered by intellectual property law were limited compared to the present day). Space, as exemplified in the Mao piece, became a major concern as the volume of information grew. However, beginning in the nineteen-sixties information technology developed that allowed libraries to store massive amounts of information in a relatively small space.

More than ameliorating some of the issues inherent in the West research model, computer assisted legal research, or CALR, has represented another major paradigm shift in the field, and will be examined in greater detail in the following section.

Part III

As the mass of available information has grown, students and professionals in the legal field have increasingly relied on computers to store, organize, and retrieve relevant materials. Digitizing and storing legal materials online offers advantages in terms of the use of space -- a server uses much less of it than a complete set of the American Digest -- and in currency; updated information can be disseminated much quicker online than in print. The following section will examine some of the differences between print and computer based research in terms of organization of information and retrieval, and discuss the history of computer based research and the extent to which it has been adopted by the legal community today. Finally, I will argue that just as the West digest system fundamentally transformed the way legal research was conducted and law libraries functioned, so has the computer and online database. A fundamental paradigm shift has occurred over the last thirty-five years; computer research is now standard practice, and is different from print-based research in a number of ways.

One of the first legal research databases was created in 1965 by Professor John Harty at the University of Pittsburgh.⁴⁹ Using punch card technology, Harty created an electronic library of the public health statutes of all fifty states. Once the cards were encoded, the data was transferred to magnetic tape.⁵⁰ Harty's system eventually grew to include some United States Supreme Court cases, as well. The legal community took note of Harty's work, and in 1966 the Ohio State Bar, led by William Harrington, began work

on a survey of electronic research services and resources.⁵¹ Harrington's group defined the basic template of the computerized legal research system as "non-indexed, full-text, online, [and] interactive".⁵² The basic Ohio definition has remained in place to this day in the form of online services like Lexis and Westlaw, although Westlaw has retained much of the structure of the key system in its electronic service.

Harrington's group eventually created OBAR (Ohio Bar Automated Research), an online system that allowed for free-text, Boolean searching.⁵³ While the database was too small to serve as a useful legal research tool, OBAR showed that free-text legal research was possible, even as traditionalists in the community argued that the structure of the digest system was essential for productive research.⁵⁴ In the late sixties, OBAR drew the attention of Thomas Plowden-Wardlaw and David Dixon, two of the founders of the Lexis research service, which along with Westlaw, became one-half of a de facto duopoly on electronic American legal research. Introduced in April of 1973, Lexis provided a comprehensive database of federal statutes and case law; state law databases were later added over the years.⁵⁵ In 1980, the Nexis database was added to the Lexis service, which gave the users access to a range of news and business periodicals.⁵⁶

The Lexis online service proved to be a quick success. Spurred by its example, West debuted their electronic research service in April 1975, dubbed Westlaw. According to Harrington, the first version of Westlaw was very limited; the system was unreliable, and the database consisted solely of West headnotes.⁵⁷ Westlaw went through several iterations over the next eight years as full-text searchability was added and reliability steadily improved, but by 1983 the system evolved into a useable research tool.⁵⁸ West also followed Lexis's lead by adding access to news and business databases to its service,

but tried to retain the key number system where possible, in the creation of an online taxonomy of legal concepts and principles. The Lexis and Westlaw databases have grown since the nineteen-eighties to serve as comprehensive collections of federal and state law, as well as valuable repositories of secondary legal research, such as law review articles and legal encyclopedias. Their popularity has grown in tandem with the spread of personal computing, and the explosive growth of the Internet in the mid-nineties and early aughts.

While there is a broad consensus in the field that electronic resources have supplanted print documents, there is surprisingly little hard evidence of usage trends in law libraries. Most of the evidence of this paradigm shift is anecdotal evidence from practicing law librarians who claim that the electronic format has gained primacy.⁵⁹ Other leading scholars in the field assume that the growth of electronic research is a constant when seen in the context of the information revolution of the late twentieth century.⁶⁰

Quantitative studies that evaluate usage rates of print resources in the electronic age are relatively scarce, but Gary Bravy and Celeste Feather produced a study in 2001 that measured the photocopy volume, circulation transactions, and shelving data from the Georgetown University law library from the 1989-1990 to 1998-1999 school years. They found as a whole, the usage measures for print resources increased in the early nineties, and then began to decline steadily after the 1993 school year.⁶¹ The data provided is only from one school, and the listed measures are not fully indicative of overall trends in print research, but it does suggest that use of print resources has declined with the growth of databases like LexisNexis and Westlaw. Assuming that a major shift has occurred in the number of people who utilize electronic information sources, the question then arises of what that change means in terms of the means users employ to retrieve information and

the quality of information received. In order to answer these questions, it would be useful to first examine the inherent differences between print and electronic research.

One of the main differences between print and “free-text” computer assisted research is in how information is indexed in each method. Bast noted that “The most obvious difference between print indexing and CALR indexing is that the latter is constructed by the researcher rather than by the publisher.”⁶² In other words, in print indices, a professional indexer will choose the relevant search term, and organize them according to subject, author, or date. The process is focused on the document rather than the user’s query term.⁶³ With computer research, the index term is essentially up to the user, as automated systems will have already indexed the occurrence of each word in a given document. The number of terms in a print index is limited in order to keep the material manageable and at a useful size; an online index is limited primarily by the quality of its search algorithm.

Using those algorithms, online legal databases are very useful at retrieving documents where there is an exact word match, but print indices return better results with questions involving abstract concepts, or implicit, rather than explicit definitions.⁶⁴ Likewise, as Bast said, online search results will be of lesser quality if “the keywords have many synonyms, can be stated in many different ways, or can express several different ideas.”⁶⁵

Part IV

The differences between print and online legal research, and the relative advantages and disadvantages of each method, are important because those differences highlight the profound shift that has occurred as electronic databases have supplanted

print methods. Legal research -- as will be discussed later in the paper -- will probably become less conceptual and more fact-specific. In her article *Electronically Manufactured Law*, Katrina Kuh crystallized these changes into three component parts, saying:

“(1) electronic researchers are not guided by the key system to the same extent as print researchers when identifying relevant theories, principles, and cases; (2) electronic researchers do not encounter and interpret individual cases through the lens of key system information to the same extent as print researchers; and (3) electronic researchers are exposed to more and different case texts than print researchers.”⁶⁶

Kuh justifies her first point by arguing that the sheer quantity of print documents available made the a Digest and index necessary to conduct research efficiently; it enabled the researcher to go directly to a topically relevant document, rather than wade through a series of books arranged in chronological order.⁶⁷ Consequently, the search will only be successful if the researcher uses the same search terms as used in the print index. She further noted that “serendipitous discovery” in print research is limited to those concepts defined by the case index.⁶⁸ If Kuh is correct, then the main advantages to the key system are consistency and authority; once a relevant key category is determined, the researcher is almost guaranteed to retrieve statutes or cases deemed relevant by an authoritative source. With CALR, the responsibility is on the user to judge relevance and quality. The flat nature of computer research gives the user more flexibility in query construction, but the end results are only as effective as the person who performs the research.

Kuh supports her second assertion (that electronic researchers do not view cases through the lens of the key system to the same extent as print researchers) by stating that the key system offers the print researcher information on the case’s subject matter, the

principle of law involved, and access to “a short summary of the case with respect to that principle.”⁶⁹ In contrast, the electronic researcher must make an immediate relevance judgment based on the title of the case, and the case’s textual content.⁷⁰ While the print method may seem more cumbersome in some respects (the user must first consult an index before pulling several print digests to retrieve relevant cases), the electronic system also requires an amount of effort on the user to read through the text of each case to ensure its relevance; the print user can rely on the authority of the key system, and reference the case headnotes. Kuh also made the assertion the case researcher “has no need to analyze the information in order to efficiently structure her search.”⁷¹, as the time consequences of a bad search are less severe in the electronic than the print world. Strictly speaking, this is true. A researcher may change a database query in a matter of seconds, while a user of print resources may have to spend hours backtracking if she chooses the wrong digest key number. However, she makes the assumption that the researcher is always the best judge of document quality. This is not the case; oftentimes the user does not know what she needs, or what is relevant or not. Use of the key system may help an inexperienced researcher retrieve relevant cases.

Finally, Kuh argues that electronic researchers are exposed to a broader variety of cases than their print counterparts.⁷² In support of this, she states that the costs (in terms of time and money) of obtaining text are lower for electronic researchers, the cost of copying texts are less, and manipulating case texts is much easier for the online than the print researcher.⁷³ As a result, the users will be exposed to a greater breadth of documents. She goes on to attack the “homogenizing influence” of the key system and their related headnotes, stating that they influence both the cases found to be relevant and

thus the case texts that are ultimately used, while the electronic researcher has more flexibility in structuring searches and making individual relevance calls.⁷⁴ Kuh is probably correct that the electronic researcher is exposed to a greater variety of sources, and is certainly correct when she states that electronic documents are retrieved and edited more rapidly, but she discounts the value of a controlling taxonomy in retrieving relevant information. Electronic retrieval systems generally return a large mass of irrelevant information -- and greater variety is not necessarily a good thing. It may lead to confusion, and the use of irrelevant information. At the least, users of information systems like Westlaw and Lexis will need to have a certain level of experience in order to separate relevant and irrelevant documents.

While Kuh does not argue that use of CALR will lead to a more fact-based approach to legal research at the expense of concepts, I believe that it will, because the key system, for all its faults, provides a uniform conceptual framework that gives the user some assistance in retrieving relevant documents. Performing print research with the key system forces the user to begin with a broad legal principle or concept, and then narrow her search down according to related sub-concepts. Cases are organized conceptually by a central authority, which enables consistency. By contrast, a computer-based researcher will often begin her search with a fact specific search term rather than an overarching principle, and look for a case that is topically rather than conceptually on point. The researcher will still have to find a case that is doctrinally appropriate, but she will have to rely upon her own knowledge and experience to obtain a good result, rather than benefit from the knowledge of the professional indexer. In *Should We Care if the Case Digest Disappears?: A Retrospective Analysis and the Future of Legal Research Instruction*,

Sabrina Sondhi suggested that legal research instruction will have to prepare lawyers for a world in which they will increasingly be left to their own devices in making document relevance judgments. She stated that while scholars such as Berring and Bintliff have published materials attesting to the value of the digest in creating a shared understanding of the law, new lawyers (who have grown up with computers and Google) have voted with their feet, “and walked over to the computer terminal.”⁷⁵ Such an observation is no doubt accurate, but if the key number system imposes a taxonomical structure that enables researchers to see the law in context, questions arise as to whether that system should be kept intact in electronic world, or if it should be replaced with something different.

Sondhi answered the first question by saying that legal research has become a multidisciplinary art.⁷⁶ While statutes and case law remain the mainstays of electronic research, the modern researcher “can search newspapers, medical journals, and practitioners’ guides” as well as unpublished opinions and case briefs.⁷⁷ An attorney with a primarily federal practice might focus on legislative materials published by the Government Printing Office or in the Congressional Record. Law students might therefore benefit from instruction in general search techniques, such as use of Boolean operators and effective keyword searching. Furthermore, the law student must continue to be taught a common legal language in which the ideas expressed in the law have a shared context, or common meaning. As Sondhi noted, there is a danger “that inexperienced researchers (such as law students) will use their full-text search results to develop and invent legal principles rather than learn and apply actual legal rules and principles.”⁷⁸

This problem gives rise to the question of whether some version of the key number system should be preserved in an online environment in order to preserve a legal lingua franca, where laws are placed in their proper context and novel doctrines are not invented on the fly. Given these dangers of free-text searching, the author argues that instead of replacing digests, the profession should change how it thinks about digests.⁷⁹ Sondhi therefore suggests that the legal research community should respond by continuing to teach the digest system with the following observations in mind. First, to the extent that instructors have moved from teaching legal digests, they have also moved away from teaching students about the underlying framework of the law, and such an “approach diminishes our shared context as a legal community...Retaining case digests in our legal instruction curriculum, in addition to full-text searching, is one way to help pass on this shared context to the next generation of lawyers.”⁸⁰

Second, Sondhi argues for more training in general print search methods. She states that:

“If students have not received commensurate levels of training in using print research materials (of any kind, not just case digests), then they are predisposed to the use of electronic research tools before the study even begins. Teaching our students how to use print-based case digests can strengthen their overall competency in print-based research, making them more competent and versatile researchers.”⁸¹

I agree with Sondhi that teaching students print research methods will make them better and more thorough researchers. Print researchers can browse the indexes to ensure comprehensiveness, and are also more likely to have a research plan in place, which means that they are less likely to stop the search the first time they find a piece of law that may or may not be relevant. Sondhi reinforces the argument that print research is likely to be more comprehensive with her third observation, that “the use of case digests

encourages a pattern of cyclical legal research wherein researchers constantly reevaluate their own findings and conclusions.”⁸² She elaborates on this point by saying that electronic research obviates the need for students to repeat their search while refining and clarifying the underlying legal principle in question – the researcher either finds or does not find a relevant document with one query, and that such results are therefore more difficult to evaluate in a greater context.⁸³

Finally, Sondhi argues that case digests save the researcher time by offering the expertise of a professional indexer.⁸⁴ In this view, the indexer has already made a determination on the value and meaning of a given concept; the researcher does not have to worry about a search being either over or under-inclusive. Digests also provide a level of authority that the individual user often lacks; the inexperienced researcher can be a poor judge of relevance. This assertion contradicts the Lee Peoples’ finding that a majority of law students in his study found digests cumbersome and unwieldy to use.⁸⁵ However, Sondhi’s point is that use of print digests save the researcher time on the back-end by providing structure, authority, and comprehensiveness. A researcher is less likely to make a mistake, or omit valuable information, with those elements in place.

I agree with Sondhi that some form of the West taxonomy should be kept in place with electronic research, in order to ensure the quality of retrieved information, and to enable the researcher to conduct her project within a larger context, and hopefully prevent errors of omission. Structured searching also provides a more solid grounding in established legal rules and precedent. I also agree that information literacy education is necessary. In *Who Are Those Guys: The Results of a Survey Studying the Information Literacy of Incoming Law Students*, Ian Gallacher of the Syracuse University College of

Law found that a combined eighty-one percent of incoming law students at that school were either “very confident” or “somewhat confident” in their research skills, and that fifty-one percent used the internet either exclusively, or most of the time.⁸⁶ The author compared this information with information from a 2004 A.A.L.L. survey which suggested that many law students lacked basic research skills.⁸⁷ Gallacher goes on to quote the A.A.L.L. study, saying that “Teaching legal research with an underlying assumption that entering first year students have basic research skills may be flawed. Integration of instruction in basic research skills may be an important component for legal education.”⁸⁸

If it is true that most incoming first year law students overestimate their abilities, and that most rely primarily on the internet for a research resource, then one can make a strong case that these students would benefit from rigorous instruction in print research methods and analytical skills. The student would hopefully learn the value of a planned, structured search, and the benefit of not stopping their research project when they retrieve one or two relevant documents, as is the danger with Google. As Gallacher and Mary Ellen Bates pithily put it: “The problem with the Google approach for nascent legal researchers is in its oversimplification of the research process. Google [teaches] us that it is no longer necessary to go through the effort of defining our information need. We just put a word or two into the search box and let a search engine disambiguate the query and provide an answer.”⁸⁹ Print research, or at least structured electronic research, can play a positive role by teaching inexperienced law students the analytical skills to construct effective queries, and separate the good information from the bad.

At the same time, I think Sondhi is too sanguine about the possibility of continued education of print research methods. Students and long-time professionals alike have long since moved to an electronic model of research. Electronic searches are generally quicker, and use of electronic databases can save a law library in terms of money spent on print subscriptions, and space, especially with the growing utility of relatively low-cost information systems like HeinOnline. In *Context and Legal Research*, Barbara Bintliff points out that “Contemporary wisdom – and some extensive analyses – tells us that it is less expensive to buy a good computer, get an Internet connection, and subscribe to several databases than it is to purchase and store range after range of books.”⁹⁰ Bintliff goes on to say that private law firms in particular have embraced this practice.⁹¹ This is telling, as private firms are usually more sensitive to cost than their academic counterparts. Also, the prevalence of Google may make students more resistant to the use of print resources. Google is, for good or ill, the first information stop for law researchers today, and there is no reason to suspect that young lawyers and law students are any different. On balance, the most effective instructional programs will be those that embrace the electronic format while teaching advanced research techniques and emphasizing the shared context of legal principles embodied in the West key number system.

Context and Legal Research is a reprint of a speech Barbara Bintliff, of the Law Library of the University of Colorado (Boulder), gave at a symposium honoring Robert Berring. In *Context*, Bintliff argued that shared context was especially necessary with electronic research because while the variety of sources accessible via Google was broad, they are:

“not organized in any meaningful way...Databases and Web sites are accessed with differing protocols; their content is often arranged in nonvisible ways, making it difficult to fully explore the sites. As a result, if legal researchers working on the same issues define the problem in different ways at the outset of their research...they might never reach that core of common rules or cases that would be identified readily within the closed universe of the digests and print resources. When this happens, despite the internal coherence of the resulting writing, there is no shared context and thus no communication.” (Id., pps. 259-260.).

Bintliff thus argues that shared context is a prerequisite for successful communication.

She goes on say that in the brave new world of electronic research, that while the digest system is cumbersome, it must not be eliminated, but replaced with a print model that includes finding aids for not just case law, but also statutory, regulatory, and secondary sources.⁹²

Even without taking computer assisted legal research in context, Bintliff argued that the all-purpose general digest was made unwieldy, if not obsolete, by the increasing specialization of the law as a profession. She stated that “No longer can “the law” be regarded as a monolithic entity. It is, instead, a series of subject specialties – with their own rules and applications, their own paradigms – based on a common foundation of principles and practices.”⁹³ Just as legal education underwent a revolution with the introduction of the Socratic method and later the general digest, Bintliff called for a new model of instruction that includes subject specific textbooks. These textbooks would be focused on a specific area, and provide ready access not just to case law, but also to statutes, regulatory materials, secondary materials, and scientific studies.⁹⁴ She then makes a general statement that “Law’s new textbooks must be designed for research in an electronic environment, not converted from print into an electronic environment.”⁹⁵

This seems to be an implicit criticism of the online West KeySearch system, although the author does not go into further detail. The West KeySearch system was West's attempt to transpose the key number taxonomy of the print digest to the electronic world. What little evidence we have on user-satisfaction and the KeySearch system suggests that some utility is lost in translation; in Lee Peoples' user study, students consistently gave the KeySearch system poor marks in terms of efficiency, ability to answer questions correctly, and in confidence in the resource.⁹⁶ More specifically, students thought that using KeySearch "unnecessarily narrowed their search options", and "was not adding anything of value to their searches."⁹⁷ Given that resistance to structured searching among younger users, the profession might benefit from a system in which the key number system operates in the background, as part of the underlying search algorithm. In such a system, the user would not necessarily feel constrained by the key number hierarchy, but could still benefit from its structure and authority. Regarding Bintliff's argument that print resources should become more subject specific and format agnostic, this has already happened to some extent with the advent of integrated search engines like Westlaw Next, where users have greater flexibility than the legacy system to limit their search according to subject matter and format. Publication of textbooks created on Bintliff's model, where multiple formats are included, based on their relevance to the subject matter, should help the researcher in that a published and peer-reviewed book has authority that an online search lacks. It should help law librarians as well, by allowing them to consolidate their print holdings into a few subject-specific areas, rather than maintain general digests that were ostensibly meant to be all things to all people.

Bintliff's idea that the digest should expand to include other primary and secondary sources is not unique to her. In *The Universe of Thinkable Thoughts: Literary Warrant and West's Key Number System*, Daniel Dabney suggested that organizing law review materials according to the Key Number system would be beneficial. He said that such an inclusion would make the Key Number system more forward-looking, stating:

“Law reviews reflect no one dominant ideology, but are more generously stocked with ideas for systemic improvement and law reform than most other legal texts. If the ideas in law reviews were somehow made more available to lawyers and judges, perhaps these ideas would get a better hearing, and the law itself would change more briskly.”⁹⁸

Like Bintliff, Dabney was speaking at a symposium honoring Robert Berring, and in his talk, he defended Berring's vision of the Key Number system as creating a “universe of thinkable thoughts” about the law, wherein the indexed terms provided a common legal vocabulary and taxonomical structure that itself became canon – simply put, if a term was not included in the index, it was not a “thinkable thought”, and therefore not an approved legal concept. Such a system is inherently conservative and backward looking; Dabney placed it in the context of “literary warrant”, meaning that “It is a firm principle in the creation of indexing systems that indexers do not anticipate subjects that might exist, or even ought to exist, but create headings only for ideas that are actually present in the literature.”⁹⁹ Dabney thus argued that the Key Number system was conservative because it adhered to this general principle of indexing, and not necessarily for reasons peculiar to the system itself. Dabney further argued that while this inherent inflexibility could be ameliorated by including legal materials other than digests (most notably law review articles), the Key Number system would become so general as to lose its utility, saying: “The great benefit of the principle of literary warrant is that it keeps indexing languages

in close touch with the collections they serve. When the collection loses its coherence, so does the indexing language.”¹⁰⁰

Dabney ultimately disagrees with Bintliff; his view is that enlarging the Key Number system to include even law review articles would cause the system to lose its coherence, and thus its utility.¹⁰¹ Dabney may or may not be correct regarding the integrity of the Key system, but he also makes the unwarranted assumption that a “pure” Key system based on case law and statutory authority will be the most useful to researchers. Several studies suggest in fact, that lawyers do not rely on intellectual indexing and use a variety of sources beyond the traditional digest – especially so using electronic research.¹⁰² In *The Universe of Thinkable Thoughts Versus the Facts of Empirical Research*, Joseph Custer attacked Dabney’s argument that the Digest System was built on a classification scheme based on literary warrant, saying instead that it was built on intuition and caprice.¹⁰³ To support his argument, Custer created a survey based on four arguments by Peter Schanck, summarized here: (1) When conducting their research, attorneys tend to use more than one system...expos[ing] the researcher to a variety of nondigest classifications, (2) A number of lawyers...claim never to use digests, (3) [L]awyers tend to concentrate more on facts...than on abstract doctrines, and (4) [Lawyers] tend to scan all or most of the cases under several key numbers, and, in the process, pay little attention to the designations assigned to the categories.¹⁰⁴ Custer then mailed a survey to 526 attorneys in Douglas County, Kansas, asking them questions about their research patterns, and which sources they used most frequently.

Custer found that the respondent attorneys used a variety of sources; he then suggested that this is evidence that attorneys approach legal research with more than one

classification system in mind.¹⁰⁵ He also found that a large majority of attorneys use a combination of print and electronic resources, law reviews were used extensively as a research tool, and that a significant portion of attorneys still used the West digest, at least occasionally. Custer found mixed evidence for Schanck's third assertion; of West Digest users, most utilized the Descriptive Word index to identify a combination of factual terms and legal concepts.¹⁰⁶ In support of Schank's fourth assertion, Custer found that attorneys tend to scan large numbers of cases, without paying much attention to the key number system.¹⁰⁷ Custer summarizes his study by saying that the Digest "is a relatively minor player in a legal culture where lawyers will go everywhere to find the law", and that free-text searching can lead to more thorough legal analysis by exposing researchers to a broader range of sources. Like Dabney, Custer suggested that classification of law review articles according to key number would be a good thing, as they are heavily used research tools. At the same time, he implied that the movement to free-text search did not represent much of a paradigm shift, as the lawyers in his study were not dependent on intellectual indexing.¹⁰⁸ In other words, they did not rely on key numbers to define legal concepts, and the digest did not create a universe of thinkable thoughts.

The researcher will thus need to rely upon librarians and information professionals to successfully navigate the brave new world of legal research, where free-text is the predominant paradigm and traditional aids like the West key system have fallen into disuse. Librarians will become even more essential in law schools, where students are largely unfamiliar with basic search techniques and legal doctrine. As such, the focus of the librarian should shift away from cataloging physical collections, and towards reference services and student instruction. A law librarian in the private sector

will probably become more of a professional searcher than anything else. Firm attorneys place a premium on speed and accuracy -- those skills in online searching will be in great demand. Given that Lexis and Westlaw both charge by query, the librarian will need to be efficient as well as fast.

In conclusion, while electronic legal research represents an entirely new paradigm for the field, it will not lessen the need for librarians. If anything, the deluge of unstructured information will make talented researchers all the more necessary. Blackstone and Langdell formalized the way we think about Anglo-American law; the law came to be defined through a few central concepts like torts, criminal law, and contract law. The West digest system revolutionized the way attorneys conducted print research by creating a comprehensive taxonomy of legal concepts that was built on Blackstone's foundation. This system was upended when computers made it possible for researchers to create their own indexes in the form of free-text searches. While it is doubtful that a new taxonomy will arise to replace the West structure (and it is unclear as to how the law itself will be influenced), the role of the law librarian will almost certainly remain vital. The librarian must serve as an interlocutor between the user and the information mass, to ensure that the researcher obtains the most relevant results possible. In that sense, the librarian *is* the replacement for the West digest. It is a heavy responsibility, and we must prepare accordingly.

NOTES

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³ Id., p. 4.

⁴ Id., p. 5.

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⁶ Id., p. 18.

⁷ Id., p. 19.

⁸ Id., p. 15.

⁹ Id., p. 16.

¹⁰ Id., p. 16.

¹¹ Woxland, T. (1989). Why can't johnny research? Or it all started with Christopher Columbus Langdell. *Law Library Journal*, 81, p. 455.

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¹⁴ Id., p. 456.

¹⁵ Kerr, O. (1999). The decline of the Socratic method at Harvard. *Nebraska Law Review*, 78, p. 127.

¹⁶ Woxland, p. 456.

¹⁷ Id., p. 457.

¹⁸ Id., p. 457.

¹⁹ West, J. (1909). Multiplicity of reports. *Law Library Journal*, p. 6.

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²¹ Id., pps. 4-5.

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²⁴ Berring, R. (2000). The evolution of research: Legal research and the world of thinkable thoughts. *Journal of Appellate Practice and Process*, 2, p. 308.

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²⁶ Kaiser, J. B. (1914). Law, legislative and municipal reference libraries: An introductory manual and bibliographical guide. Boston: Boston Book Company, p. 16.

²⁷ Berring, *The Evolution of Research: Legal Research and the World of Thinkable Thoughts*, p. 308.

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³¹ Doyle, J. (1992). Westlaw and the American digest classification scheme. *Law Library Journal*, 84, p. 247.

³² Snyder, p. 545.

³³ Kaiser, p. 7.

³⁴ Id., p. 16.

³⁵ Roalfe, William R. (1953). The libraries of the legal profession. St. Paul: West Pub. Co. p. 49.

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³⁷ Bast, p. 290.

³⁸ Hanson, p. 568.

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⁴⁶ Id., 570.

⁴⁷ Id., 572-573.

⁴⁸ Id. 573.

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⁵² Id., p. 545.

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⁵⁴ Id., p. 549.

⁵⁵ Id., p. 553.

⁵⁶ Id., p. 553.

⁵⁷ Id., p. 553.

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⁶⁴ Id., p. 293.

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⁶⁷ Id., p. 243.

⁶⁸ Id., p. 244.

⁶⁹ Id., p. 246.

⁷⁰ Id., p. 246.

⁷¹ Id., p. 246.

⁷² Id., p. 247.

⁷³ Id., p. 247.

⁷⁴ Id., p. 249-250.

⁷⁵ Sondhi, S. (2008). Should we care if the case digest disappears?: A retrospective analysis and the future of legal research instruction. *Legal Reference Services Quarterly*, 27(4), p. 264.

⁷⁶ Id., p. 274.

⁷⁷ Id., p. 274.

⁷⁸ Id., p. 274.

⁷⁹ Id., 274.

⁸⁰ Id., 274-75.

⁸¹ Id., p. 275.

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⁸⁴ Id., p. 276.

⁸⁵ Peoples, L. (2005). The death of the digest and the pitfalls of electronic research: What is the modern legal researcher to do? *Law Library Journal*, 97, p. 672.

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⁸⁸ Id., p. 189.

⁸⁹ Id., p. 191.

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⁹¹ Id., p. 250.

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⁹³ Id., p. 264.

⁹⁴ Id., p. 265.

⁹⁵ Id., p. 265.

⁹⁶ Peoples, pps. 673-674.

⁹⁷ Id., p. 675.

⁹⁸ Dabney, D. (2007). The universe of thinkable thoughts: Literary warrant and West's key number system. *Law Library Journal*, 99, p. 243.

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¹⁰¹ Id., p. 247.

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